



REPORT ON GEOPHYSICAL SURVEYS

OGDEN GROUPS #1 and 2, OGDEN TOWNSHIP, ONTARIO

INTRODUCTION

A geomagnetic survey was performed on Ogden Group #1 during the period February 26 to March 17, 1970. Geomagnetic and electromagnetic surveys were performed on Ogden Group #2 during the period May 22 to June 5, 1970 Claims are listed below:

Ogden Group #1

P-99249 - 99255 inclusive

P-100309

P-100717 - 100727 inclusive

Ogden Group #2

P-101174 - 101180 inclusive

P-217754 - 217757 inclusive

P-218485 - 218486

The claims are recorded in the name of Hollinger Mines Limited (Miner's License A-20822) Timmins, Ontario.

LOCATION AND ACCESS

Ogden Group #1 is located in Lots 7, 8, 9 and 10 Concession 3 and Group #2 is located in Lots 3, 4 and 5 Concession 3. Access to Ogden Group #1 is via Wawiatin Falls road to a point 2000 feet west of west boundary, and access to Ogden Group #2 is via Papakomeka Lake road and jeep road to east end of property base line. The east end of Ogden Group #1 is transgressed by Wawiatin Falls Powerline.

TOPOGRAPHY

Ogden Group #1 is generally spruce alder swamp with an area of birch poplar spruce high ground in central portion. Drainage is west to Mattagami River from west part of property and east, north east to Mountjoy River from east part of property.

Ogden Group #2 is high ground poplar, birch, spruce, jackpine outcrop with the Mountjoy River bounding the property on the south forming a deep valley.

GEOLOGY

Mapping by Hurst, Griffis, Gustafson and Moss, Carlson, Alexander and MacDonald indicate that area is underlain by intermediate to acid volcanics with tuffaceous members and local areas of stratiform iron formation all intruded by apparently concordant and discordant differentiated ultramafic (gabbro-peridotite) bodies.

PREVIOUS WORK

In the 1940's Wasu Porcupine drilled seven (7) holes totalling 7306' across sectioning the central portion of Ogden Group #1. In 1965 Cana Exploration Consultants Limited performed horizontal loop electromagnetic and geomagnetic surveys ^{for} Brabar Mines Limited on part of the claim group which forms Ogden Group #1.

Prior to 1940 there were six (6) holes drilled on south boundary of Ogden Group #2. These holes are recorded on maps produced by Gustafson, Griffis and Moss- No other work is recorded.

GEOMAGNETIC SURVEY OGDEN GROUP #1

Personnel Employed

R. C. Humphrey and R. B. Lewis were responsible for establishing base stations-Denis Young (Shield Geophysics) performed the Survey all under supervision of H. Z. Tittley and writer. W. Caughell was responsible for preparing plans.

INSTRUMENTS USED

Base stations were established using A.B.E.M. MZ-4 Magnetometer Serial No. 4599 sensitivity 10.1 gammas per scale division-Survey was performed with Askania G's Magnetometer sensitivity 219-8 gammas per scale division.

Both instruments measure vertical intensity of the earth's magnetic field.

SURVEY METHOD

The survey was performed on grids, lines (re-established grid of Braber Mines Limited) is cut at 400' intervals off base line trending 95°. Intermediate 200' interval lines were established in east central portion of property.

Observations were made at 100' intervals along all grid and base lines.

Survey results are tied to property main base (34 + 00W, 0+00 BL) assigned a value of 1524 gammas relative to government base station (Bristol-Ogden Township Line) 945 gammas. Sub base stations are established at 100' intervals along 0+00 B.L.

RESULTS

The results of geomagnetic survey are plotted on accompanying plan "Hollinger Mines Limited Geomagnetic Survey Ogden #1, Ogden Township, Scale 1" = 400'".-

Contour interval is 100 gammas up to 1500 gammas 1700 gamma contour, and 500 gammas up to 6000 gammas plus.

The magnetic gradient is from a low of 901 gammas to a high of 14880 gammas with background relief of 1200-1300 gammas.

There are two parallel magnetic features A and B both trending at 70° at west end and changing to 90° trend at east end. Drilling by Wasa Porcupine intersected serpentized peridotite in area of the two anomalies on extension of anomaly A OL 44E 18+00W there is an outcrop of serpentized peridotite.

South of base line XL 8E to XL 32E there is irregular shaped anomaly "C". Drilling by Wasa Porcupine in this area intersected serpentized peridotite which is probably causative body.

Anomaly D starts at XL 4E and extends to south west boundary of property with a peak value of 14880 gammas. Drilling 1000 feet south west of west end of anomaly D intersected serpentized peridotite.

Local magnetic features (32 + 00W 1+00N) is due to iron formation (magnetite) in volcanics.

CONCLUSIONS

Geomagnetic survey defined three parallel magnetic anomalies. These anomalies are associated with ultramafic rocks (diamond drilling and outcrop exposures).^{The} Survey indicates a change in geological trend from 60° -70° in west part of property to 90° in east section of property.

GEOMAGNETIC SURVEY OGDEN GROUP #2

Personnel Employed

R. C. Humphrey and P. Daly performed the survey and reduced notes. H. Z. Tittley supervised the work. W. Caughell was responsible for preparing plans.

INSTRUMENT USED

Survey was performed with ABEM MZ-4 magnetometer Serial No.4599 sensitivity 10.1 gammas per scale division.

The instrument used measures vertical intensity of earth's magnetic field.

SURVEY METHOD

The survey was performed on grid lines at 90° to base line (bearing 280° from a point 1300' north 2 Mile Post Ogden-Delore Township line), at 400' intervals.

Observations were made at 100' intervals along grid and base lines.

Survey results were tied to property main base (4+00E 0+00 B.L.) assigned a value of 1368 gammas relative to government base station (Bristol-Ogden Township Line) 945 gammas. Secondary base stations were established at 100' intervals along 0+00 B.L. from 3+00E to 64+00W.

RESULTS

The results of geomagnetic survey are plotted on accompanying plan "Hollinger Mines Ltd., Geomagnetic Survey, Ogden #2 Ogden Township, Scale 1" = 400' ".

Contour interval is 100 gammas up to 1500 gammas, 1700 gamma contour, and 500 gammas up to 5000 gammas plus.

The magnetic gradient is from a low value of 75 gammas to a high value of 19,810 gammas with a back ground relief 900-950 gammas.

A magnetic high feature "Anomaly E" parallels to 0+00 B.L. from west end of property to 28+00W. This feature has a peak value of 10311 gammas. Geological mapping Alexander indicates that sensitive body is magnetic ultramafic rocks (gabbro-peridotite).

The magnetic feature along north-boundary of property "Anomaly F" trends generally east west and more lenticular in character than

anomaly "E". Peak values are 19,810 gammas. Geological mapping indicates that causitive body are narrow lens of stratiform magnetite rich iron formation which trend at 70° in an acid metatuff-sediment environment.

Two magnetic features in east central and southern part of property Anomaly "G" and Anomaly "H" trend also at 70° . Anomaly "G" has peak value of 14,235 gammas and Anomaly "H" has peak value of 1930 gammas. There is no outcrop exposure in area of anomalies however due to there particular nature it would appear that causitive body is stratiform weakly magnetic iron formation.

CONCLUSIONS

The geomagnetic Survey has defined two definite type of anomaly one caused by ultramafic rocks and the other caused by magnetic iron formation. The iron formation trend appears to be stratigraphic trend of rocks and it would appear that ultramafic body is somewhat discordant trending at 90° - 100° .

ELECTROMAGNETIC SURVEY OGDEN GROUP #2

Personnel Employed

R. C. Humphrey acted as instrument operator and R. C. Shirley and P. M. Daly acted as assistants. H. Z. Tittley supervised field work. W. Caughell was responsible for preparing plans.

INSTRUMENT USED

The survey was performed using a Ronka MK 111 Dual Frequency Horizontal Loop Electromagnetometer, using only the high frequency on this survey.

The power source are 9 (1.35V) batteries at transmitter whose power output on low frequency (876 C.P.S.) is 5 watts and a high frequency (2400 C.P.S.) is 2 watts.

The transmitted signal (primary field) if it does not contact any secondary field is balanced by compensating voltage and value recorded is not anomalous. In presence of a secondary field the received signal is changed. The amount of change in compensating voltage required to achieve null position is measured as a percentage of its original value.

The compensating net work balances the received signal with two components 90° out of phase with each other. Therefore if primary field encounters an anomalous condition secondary field received is measured by altering both "in phase" and "out of phase" component to adjust compensating voltage to produce null. The readings observed are recorded as in phase and out of phase.

Generally conductivity is indicated by a negative change in in phase and out of phase response.

RESULTS

The results of the survey are plotted on the accompanying plan "Hollinger Mines Ltd., H.E.M. Survey Ogden #2 Ogden Twp. Ontario. Scale 1" = 400'".

Profile scale is 1" = 40' and positive readings are plotted to left of line.

There are no conductors allocated by the horizontal loop electromagnetic survey.

There are four (4) anomalous in phase (one reading) responses on XL 28W, XL 32W and XL 36W north of 0+00 B.L. These responses occur when receiver coil is set up over a very magnetic (13,000 to 19,000 gamma) iron formation

CONCLUSION

The electromagnetic survey indicates that there are no east west conductive zones greater than 400' long in the area surveyed.

Respectfully submitted,

B. I. MacDonald

B. I. MacDonald,

Field Geologist.

HOLLINGER MINES LIMITED

TIMMINS, ONTARIO

August 28, 1970.



GEONICS LIMITED

2 Thorncliffe Park Drive, Toronto 17, Ontario, Canada. Tel. (416) 425-1821, Cables: Geonics

(Preliminary Specification Sheet)

EM17 HORIZONTAL-LOOP ELECTROMAGNETIC UNIT

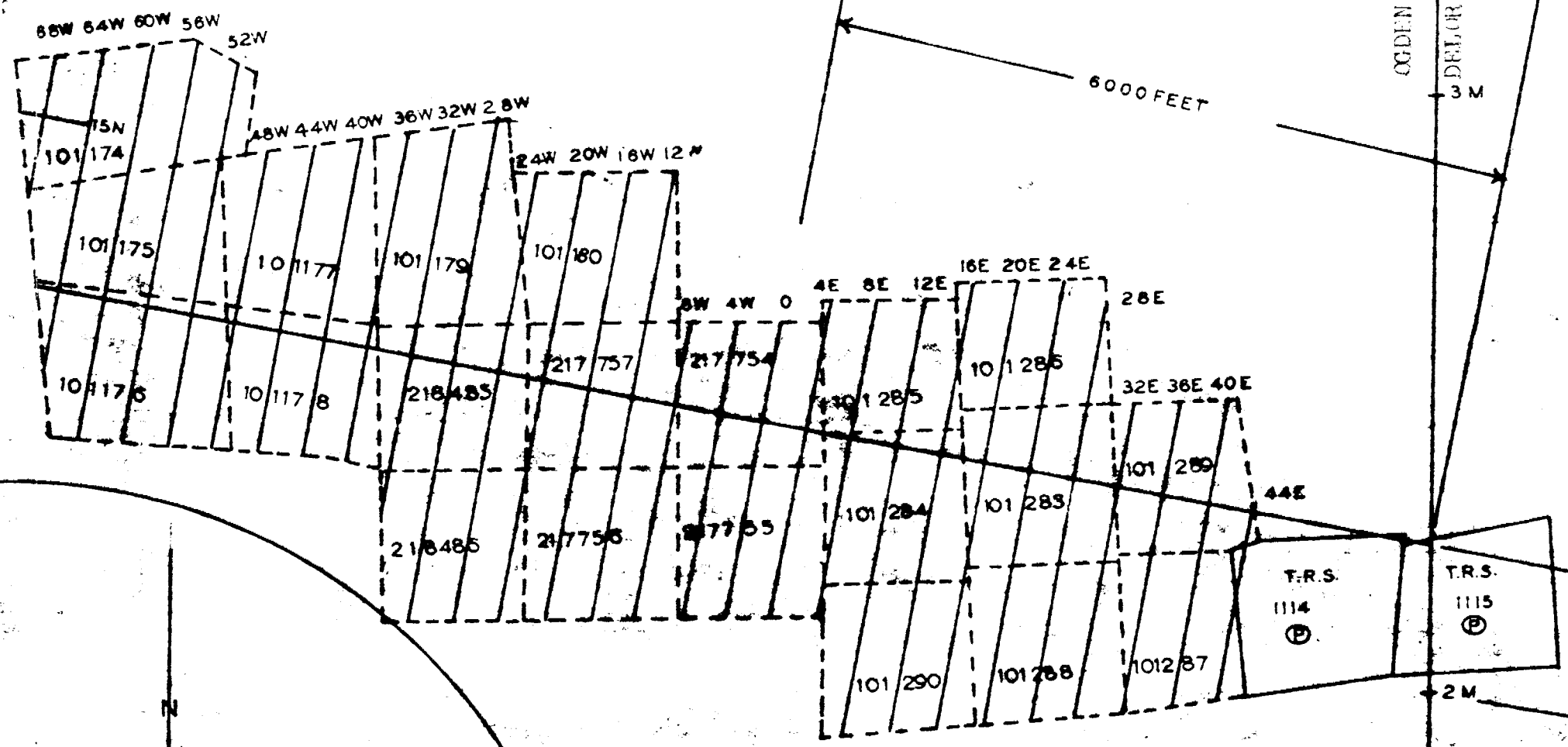
The EM17 is designed to be used primarily as a horizontal-loop EM equipment. In addition a provision is also made for use in a co-axial coil orientation.

The design objective was to incorporate all the latest electronic techniques in a lightweight direct-reading unit capable of being operated by inexperienced personnel in difficult conditions.

1. Coil Orientation: Co-planar or co-axial
2. Quantities Measured: Real component
Imaginary component
3. Range of Scales: Real: $\pm 20\%$, $\pm 100\%$
Imag: $\pm 10\%$, $\pm 50\%$
4. Coil Separation: 100, 200, 300 and 400 ft.
5. Frequency of Operation: 1600 Hz ($\omega = 10^4$)
6. Method of Reading: Self indicating meters for each component. No manual adjustments after initial nulling at start of survey.
7. Readability: 0.25% Imag., 0.5% Real on narrower scales
8. Repeatability: As above
9. Bandwidth of the Receiver System: 0.06 Hz
10. Transmitter Output: 2.5 W, 24 At-m²
11. Power - Receiver:
Transmitter: 8 cells type C
Life 20 hrs. cont. duty
8 cells type D
Life 20 hrs. cont. duty
12. Type of Cable for ref: Any 2 wire cable, no shield
13. Dimensions: Receiver Console 7.7 x 5.3 x 10.2 inches
(19.5 x 13.5 x 26. cm)
Receiver Coil: 25 inches diameter (63 cm)
Transmitter Console: 5.85 x 3.15 x 10.2 inches
(15 x 8 x 26 cm)
Transmitter Coil: 25 inches diameter (63 cm)
14. Weights: Receiver Console: 6.83 lbs. (3.1 kg)
Receiver Coil: 6.4 lbs. (2.9 kg)
Transmitter Console: 6.62 lbs. (3.0 kg)
Transmitter Coil: 7.92 lbs. (3.6 kg)

SECTION # 2 GRANT, OGDEN TOWNSHIP, CO. 21
Claims P-101174-80, P-21777-57, P-218485-88.

Scale 1" = 1320'



NORTH

0+0 BASE LINE

6000 FEET

OGDEN TOWNSHIP
DELCORO TOWNSHIP

3 M

T.R.S.
1114
Ⓟ

T.R.S.
1115
Ⓟ

1300 FT.

2 M

MOUNTJOY TWP M-302

THE TOWNSHIP OF

OGDEN

DISTRICT OF COCHRANE

PORCUPINE MINING DIVISION

SCALE: 1-INCH = 20 CHAINS

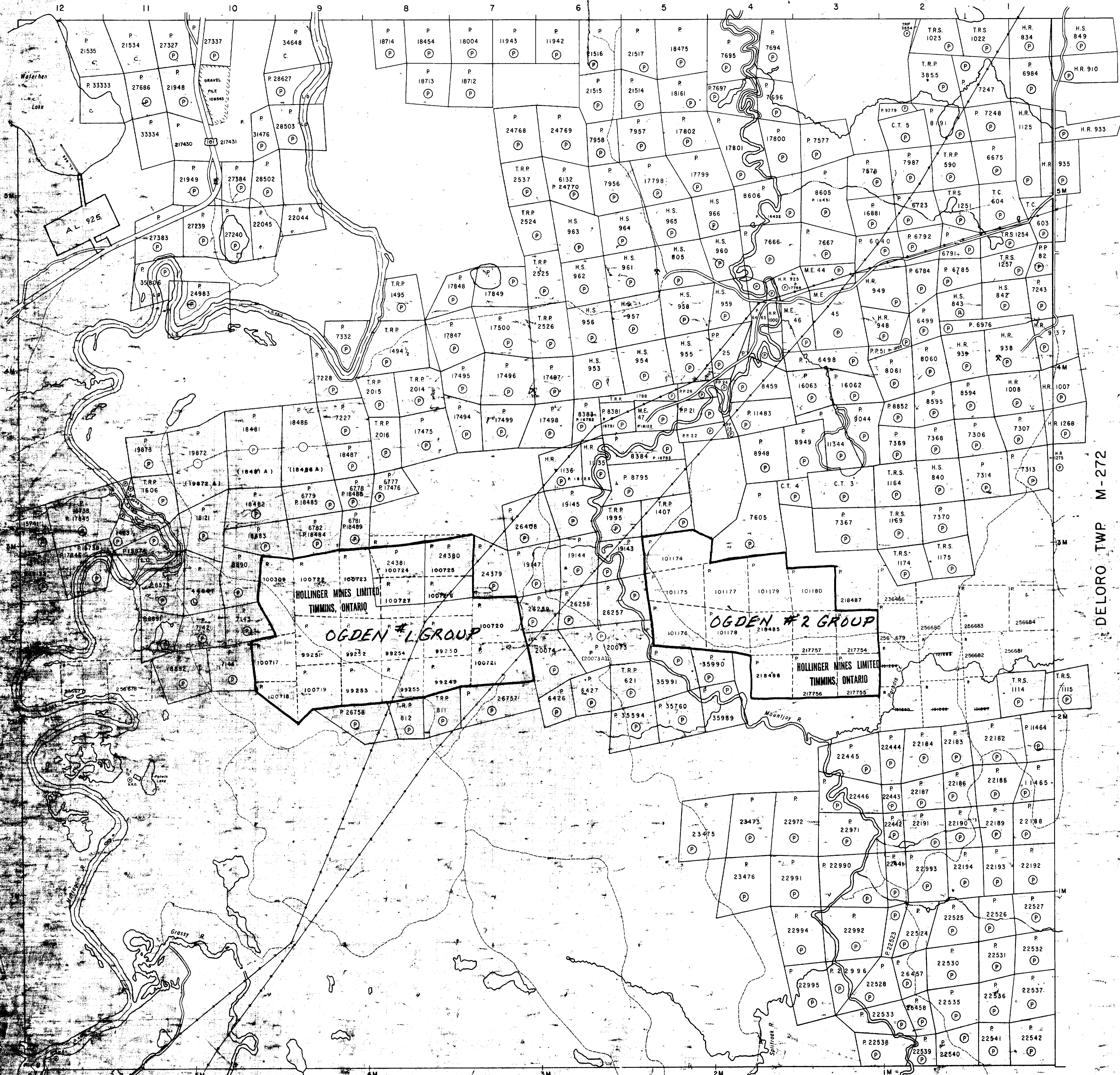
LEGEND

- PATENTED LAND (P)
- CROWN LAND SALE (C)
- LEASES (L)
- LOCATED LAND (Loc)
- LICENSE OF OCCUPATION (L.O.)
- MINING RIGHTS ONLY (M.R.O.)
- SURFACE, RIGHTS ONLY (S.R.O.)
- ROADS (R)
- IMPROVED ROADS (IR)
- KING'S HIGHWAYS (KH)
- RAILWAYS (R.L.)
- POWER LINES (P.L.)
- MARSH OR MUSKEG (M)
- MINES (M)
- CANCELLED (C)

NOTES

400' Surface Rights Reservation around all lakes and rivers.

L.O. 6613 - Booming Grounds - covers the westerly half of the bed of the Mattagami River flowing through this township. File - 73543.



DELORO TWP M-272

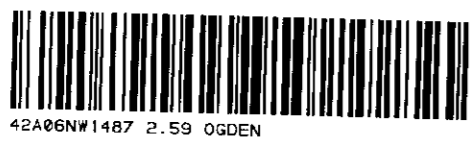
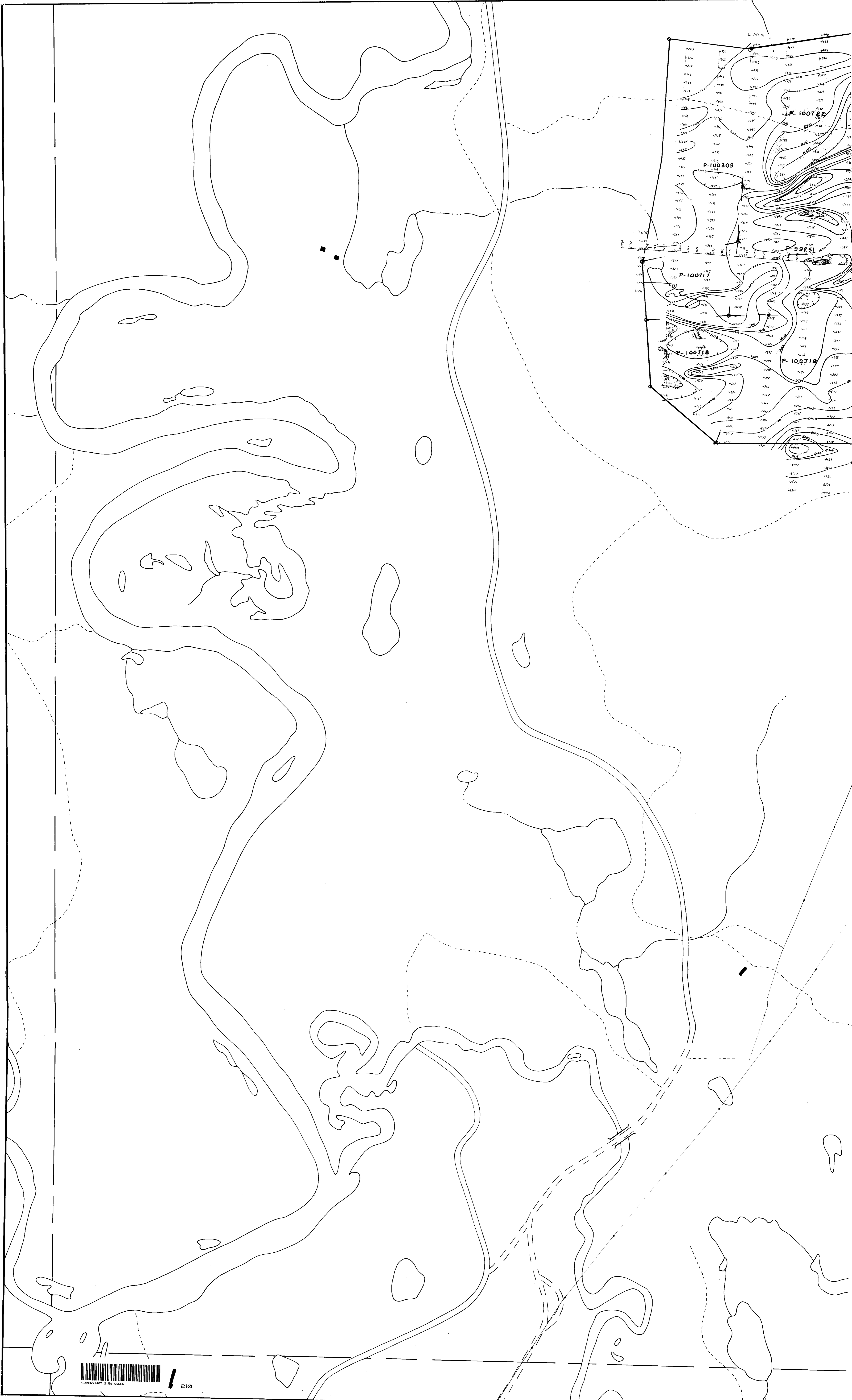
PRICE TWP M-30

PLAN NO. M-305

DEPARTMENT OF MINES

- ONTARIO -



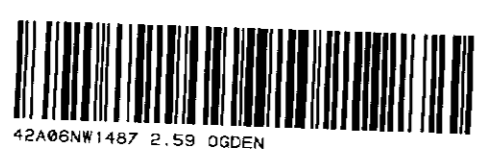
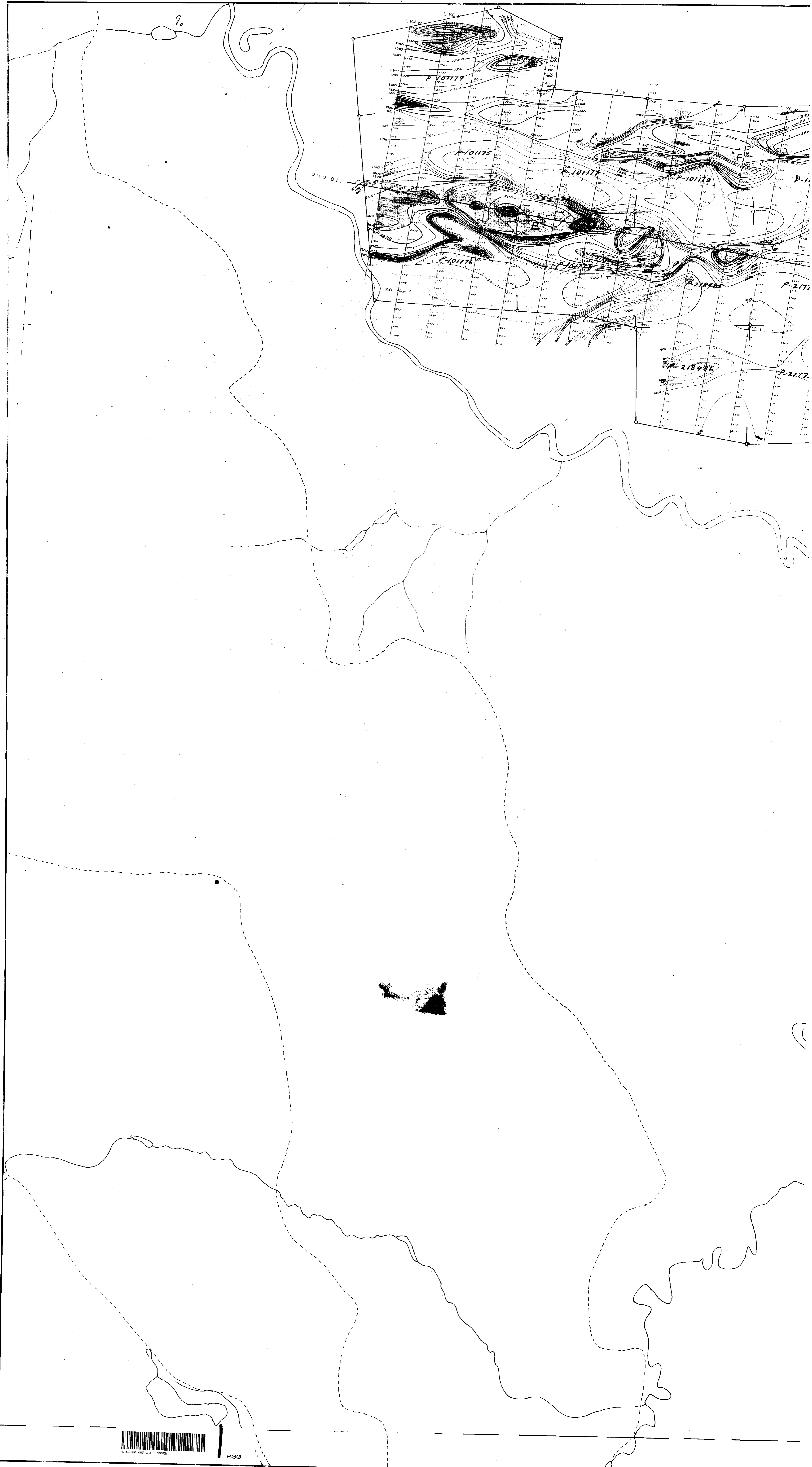


1248091187 2.59 050EN

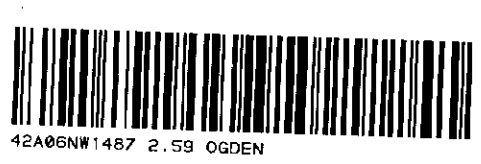


1020	1025	1030	1035	1040	1045	1050	1055	1060	1065	1070	1075	1080	1085	1090	1095	1100	1105	1110	1115	1120	1125	1130	1135	1140	1145	1150	1155	1160	1165	1170	1175	1180	1185	1190	1195	1200	1205	1210	1215	1220	1225	1230	1235	1240	1245	1250	1255	1260	1265	1270	1275	1280	1285	1290	1295	1300	1305	1310	1315	1320	1325	1330	1335	1340	1345	1350	1355	1360	1365	1370	1375	1380	1385	1390	1395	1400	1405	1410	1415	1420	1425	1430	1435	1440	1445	1450	1455	1460	1465	1470	1475	1480	1485	1490	1495	1500	1505	1510	1515	1520	1525	1530	1535	1540	1545	1550	1555	1560	1565	1570	1575	1580	1585	1590	1595	1600	1605	1610	1615	1620	1625	1630	1635	1640	1645	1650	1655	1660	1665	1670	1675	1680	1685	1690	1695	1700	1705	1710	1715	1720	1725	1730	1735	1740	1745	1750	1755	1760	1765	1770	1775	1780	1785	1790	1795	1800	1805	1810	1815	1820	1825	1830	1835	1840	1845	1850	1855	1860	1865	1870	1875	1880	1885	1890	1895	1900	1905	1910	1915	1920	1925	1930	1935	1940	1945	1950	1955	1960	1965	1970	1975	1980	1985	1990	1995	2000
------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------

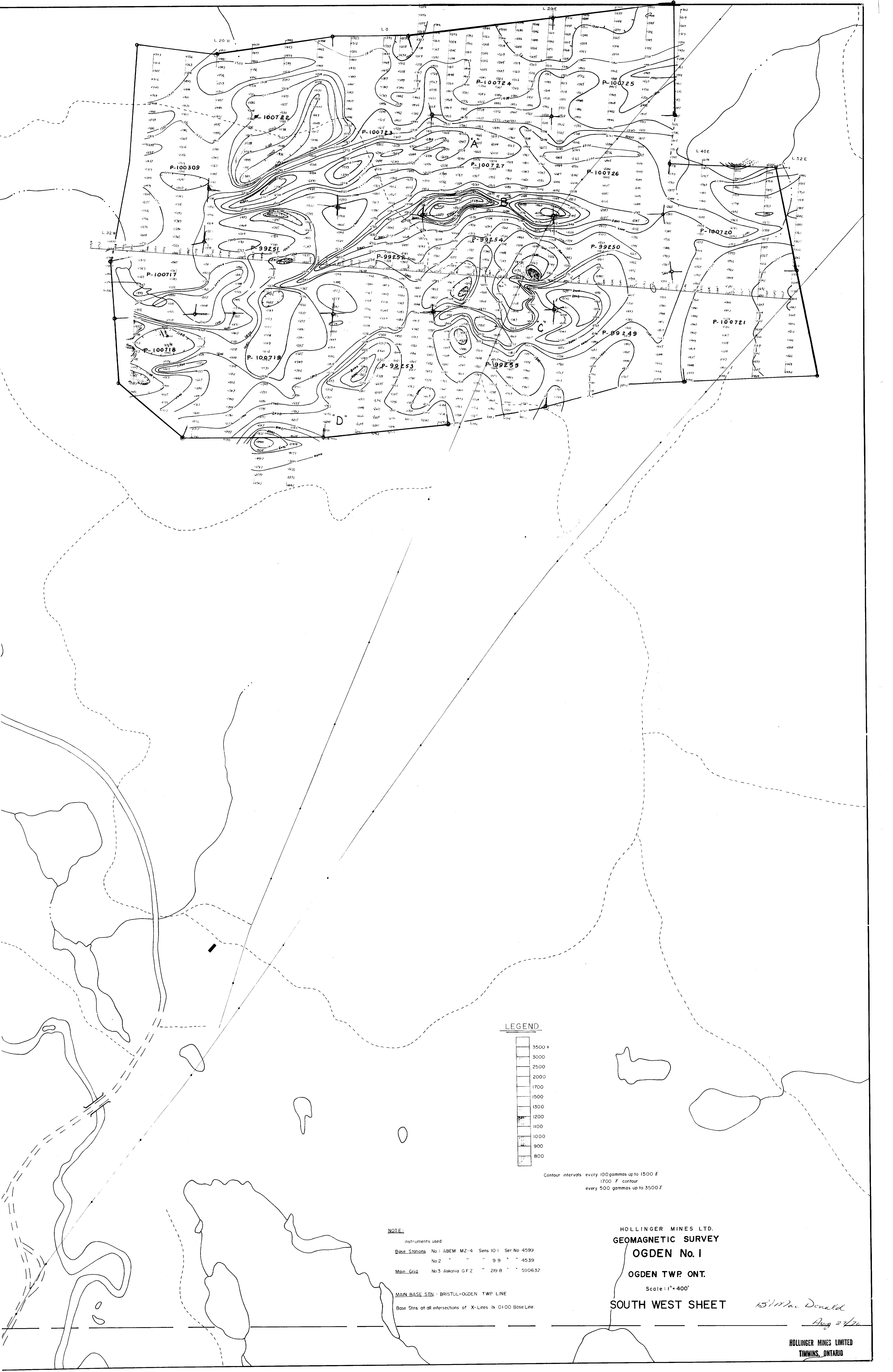




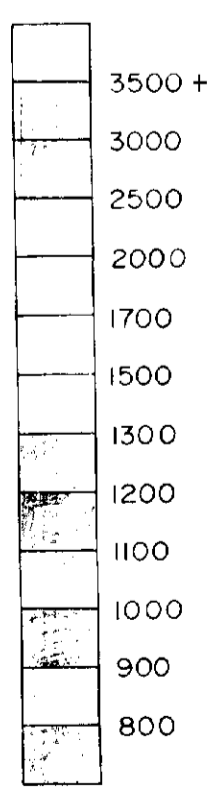
42488N1487 2.58 0507



42AR001487 2:53 00ZEN



LEGEND



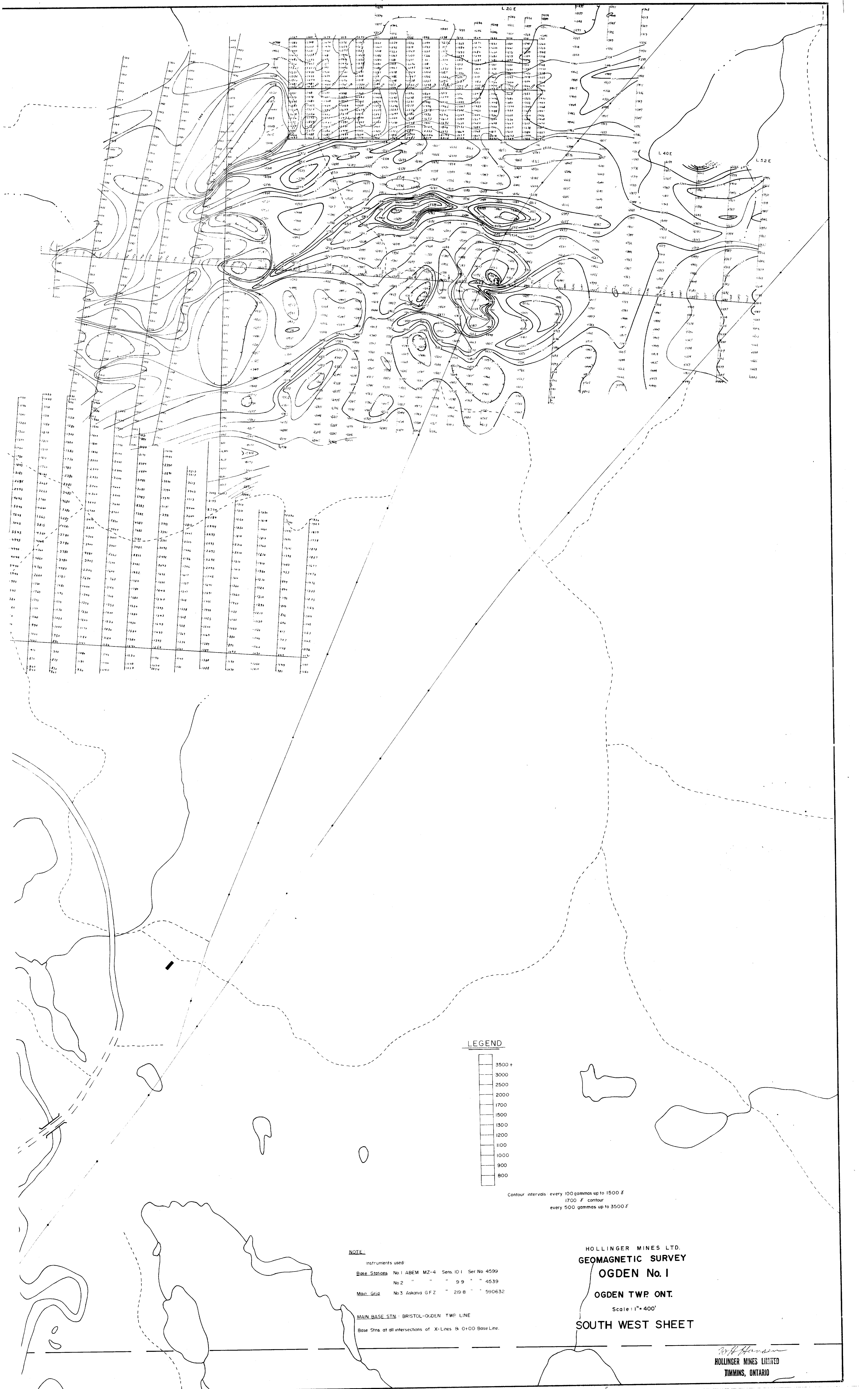
Contour intervals: every 100 gammas up to 1500 &
 1700 & contour
 every 500 gammas up to 3500 &

NOTE:

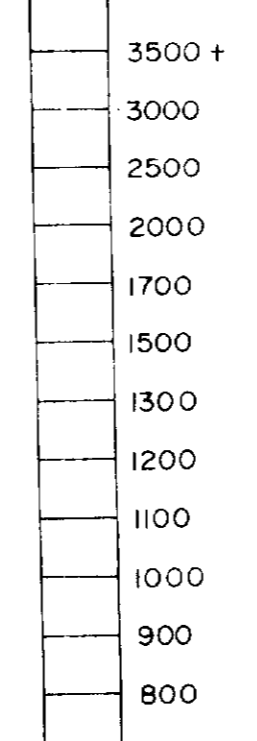
Instruments used:
 Base Stations No. 1 ABEM M2-4 Sens 101 Ser No 4599
 No. 2 " " " 9-9 " 4539
 Main Grid No. 3 Askania GFZ " 219-B " 590632
 MAIN BASE STN: BRISTOL-OGDEN TWP LINE
 Base Stns at all intersections of X-Lines & O100 Base Line.

HOLLINGER MINES LTD.
 GEOMAGNETIC SURVEY
 OGDEN No. 1
 OGDEN TWP. ONT.
 Scale: 1" = 400'
 SOUTH WEST SHEET

B. MacDonald
 Aug 2/20



LEGEND



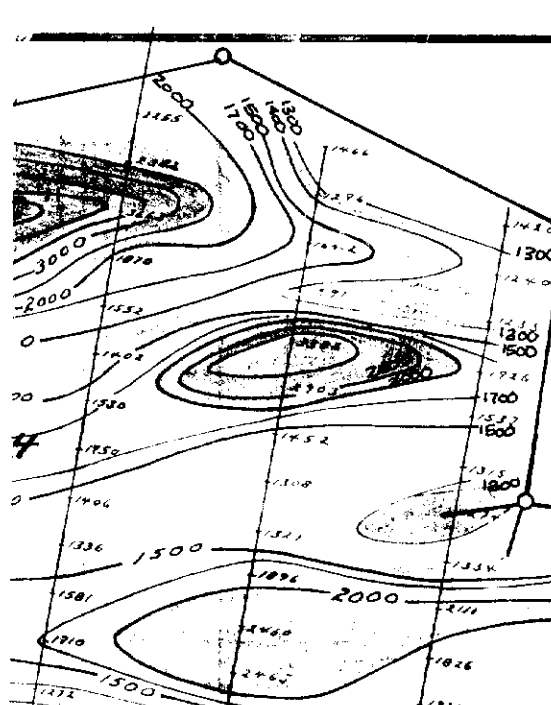
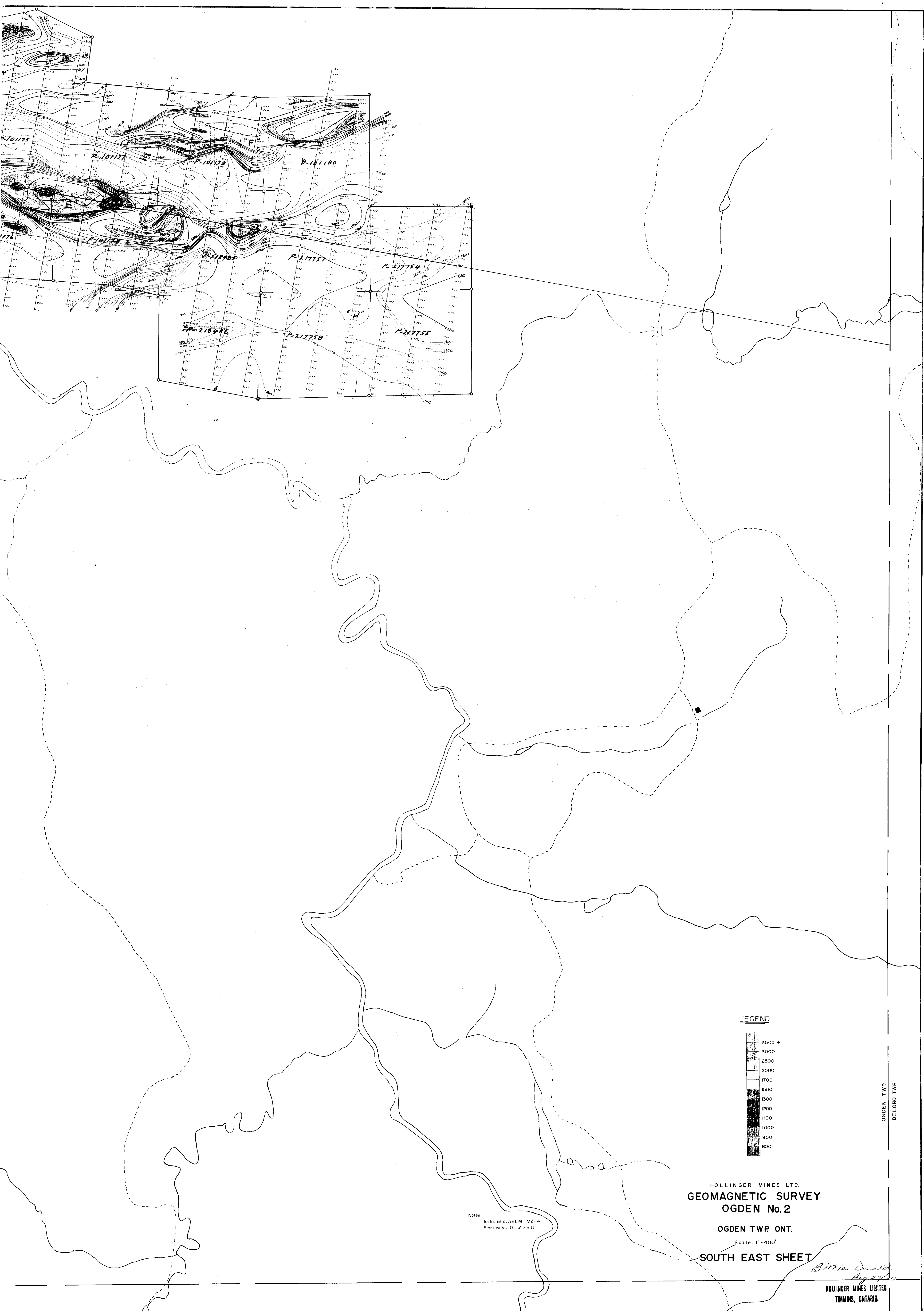
Contour intervals: every 100 gammas up to 1500 &
 1700 & contour
 every 500 gammas up to 3500 &

NOTE:

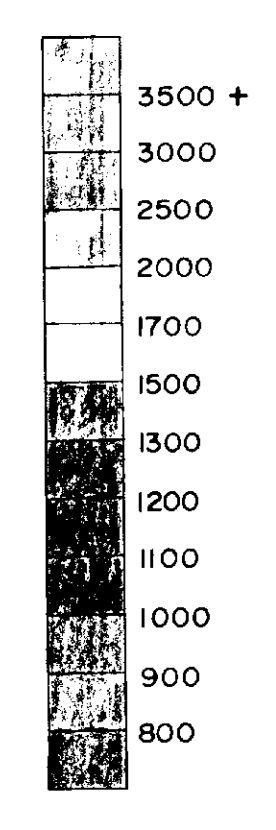
Instruments used:
 Base Stations No 1 ABEM MZ-4 Sens. IO I Ser No 4599
 No 2 " " " 9-9 " 4539
 Main Grid No 3 Askana G.F.Z " 219-B " 590632
 MAIN BASE STN: BRISTOL-OGDEN TWP LINE
 Base Stns at all intersections of X-Lines & O+OO Base Line.

HOLLINGER MINES LTD.
 GEOMAGNETIC SURVEY
 OGDEN No. I
 OGDEN TWP. ONT.
 Scale: 1" = 400'
 SOUTH WEST SHEET

W. J. Johnson
 HOLLINGER MINES LIMITED
 TIMMINS, ONTARIO



LEGEND



Notes:
Instrument: ABEM MZ-4
Sensitivity: 10 I.F./S.D.

HOLLINGER MINES LTD.
GEOMAGNETIC SURVEY
OGDEN No. 2

OGDEN TWP. ONT.

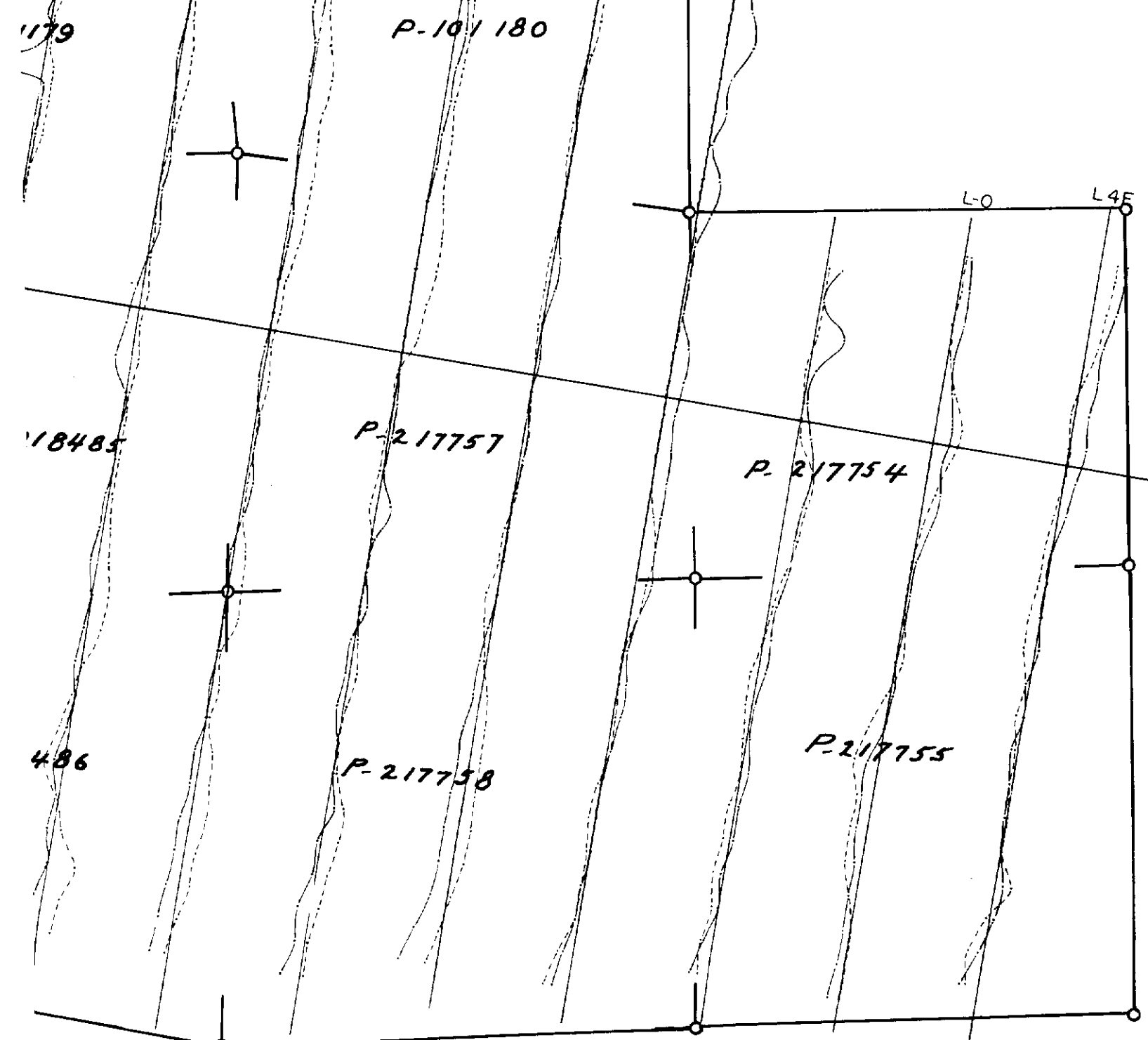
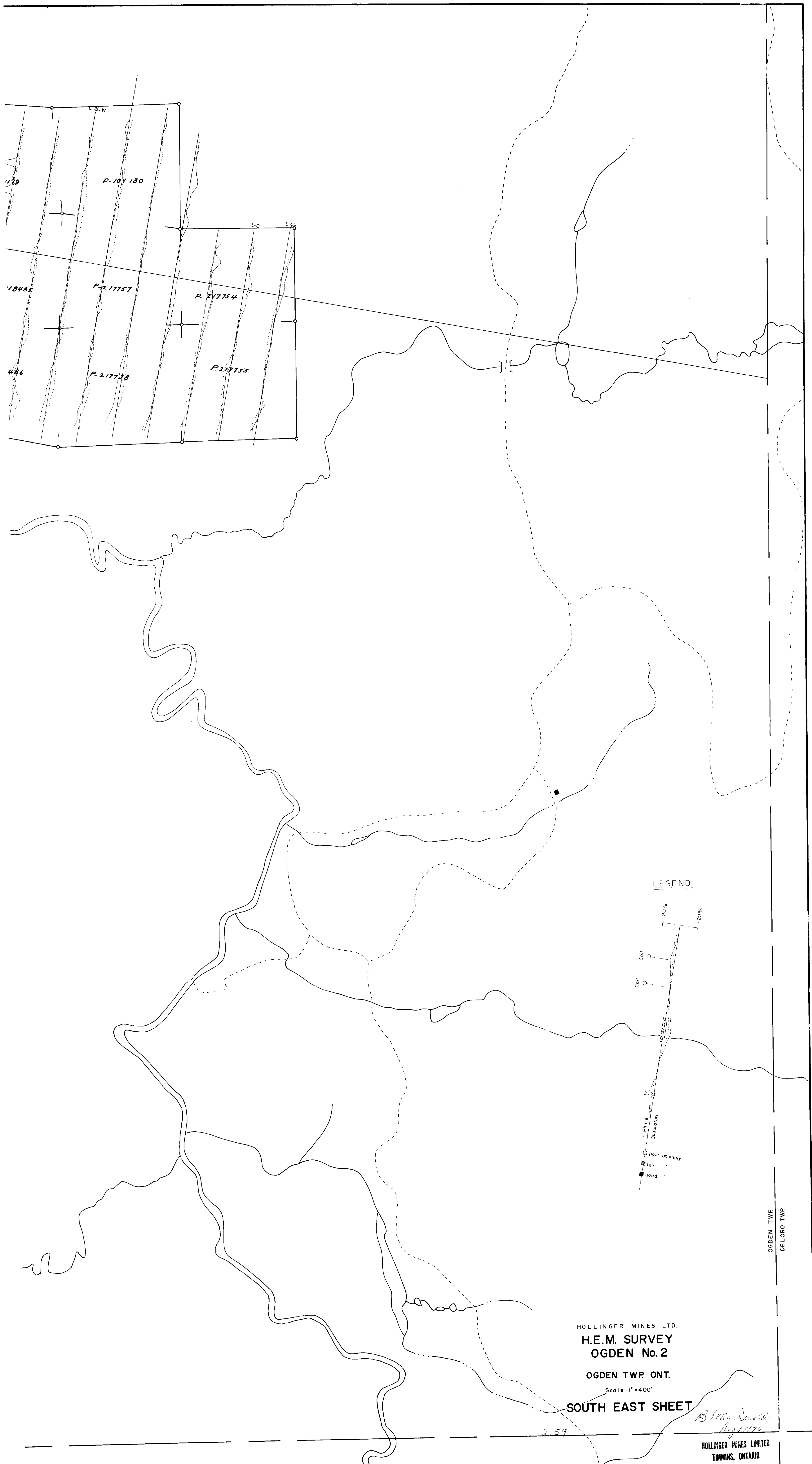
Scale: 1" = 400'

SOUTH EAST SHEET

B. Mac Donald
Aug 27/50

HOLLINGER MINES LIMITED
TIMMINS, ONTARIO

OGDEN TWP.
DELORO TWP.



LEGEND.

- ± 20%
- ± 20%
- Cell
- Cell
- In-Phase
- Substructure
- poor anomaly
- fair
- good

HOLLINGER MINES LTD.
H.E.M. SURVEY
OGDEN No. 2
 OGDEN TWP. ONT.
 Scale: 1"=400'
SOUTH EAST SHEET

B. Mac Donald
Aug 25/70

HOLLINGER MINES LIMITED
 TIMMINS, ONTARIO

OGDEN TWP.
 DELORO TWP.

2.59